



PCT

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52

(81) **Designated States** (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) **Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG).

Published:
— *without international search report and to be republished upon receipt of that report*

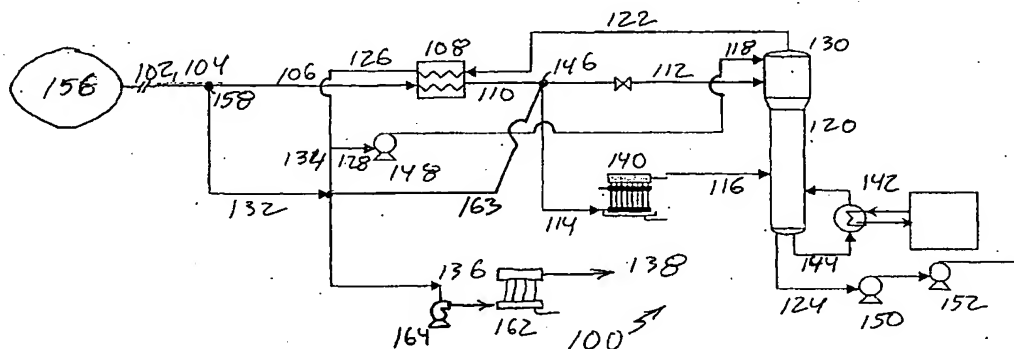
For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

SEPARATION OF LPG/NGL (C2+) FROM LNG

(71) Applicant (for all designated States except US): AKER
KVAERNER, INC. [US/US]; 7909 Parkwood Circle
Drive, Houston, TX 77036 (US).

(72) Inventor; and
(75) Inventor/Applicant (for US only): **SHAH, Kamal**
[US/US]; 1738 Carriage Way, Sugar Land, TX 77478
(US).

(74) Agents: REPPER, George, R. et al.; 1425 K Street NW, Suite 800, Washington, DC 20005 (US).



(57) Abstract: Liquefied petroleum gas or natural gas liquids may be recovered from liquefied natural gas by receiving an input stream comprising substantially rich liquefied natural gas, splitting the input stream into a direct stream and a bypass stream, heating the direct stream in a cross-exchanger to produce a stream of heated rich liquefied natural gas, splitting the heated rich liquefied natural gas into a primary column feed, an optional bypass stream and a secondary column feed, vaporizing at least a major portion of the secondary column feed in a vaporizer to produce a vaporized secondary column feed, fractionating the top feed, the primary column feed, and the vaporized secondary column feed in a fractionation unit to produce an overhead product stream and a bottom product stream, condensing at least a major portion of the overhead product stream by cooling the overhead product stream in the cross-exchanger to produce a condensed overhead product stream, pumping a reflux portion of the condensed overhead product stream to a top of the fractionation unit, mixing the bypass portion of the rich liquefied natural gas and an optional bypass stream with a balance portion of the condensed overhead product stream to produce an output stream, and vaporizing the output stream to produce a conditioned natural gas suitable for delivery to a pipeline or for commercial use.